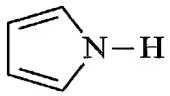
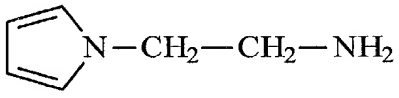
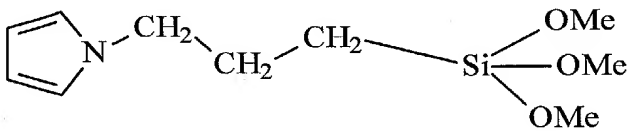
10. (Amended) Method according to claim 1, wherein the collective electropolymerisation is carried out by immersing the structured substrate obtained in step a) mentioned above in an electrolytic bath comprising a solution of pyrrole, functionalised pyrrole, and suitable chemical reagents for electropolymerisation, in the presence of a counterelectrode which is immersed in the electrolytic bath and is independent of the structured substrate, the layer of material capable of initiating and promoting the adhesion onto said layer of the pyrrole and functionalised pyrrole copolymer film forming a working electrode.

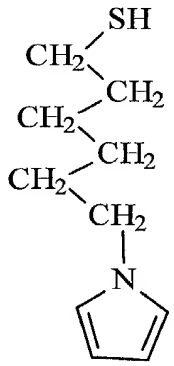
11. (Amended) Method according to claim 1, wherein the functionalised pyrrole is a pyrrole comprising a group chosen in a set comprising an $NH_2$ group, a thiol group, an N-hydroxysuccinimide ester group, a trimethoxy silyl group, a carboxyl, aldehyde and isothiocyanate group.

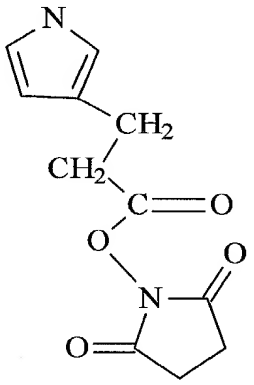
12. (Amended) Method according to claim 1, wherein the functionalised pyrrole is chosen from one of the following compounds:



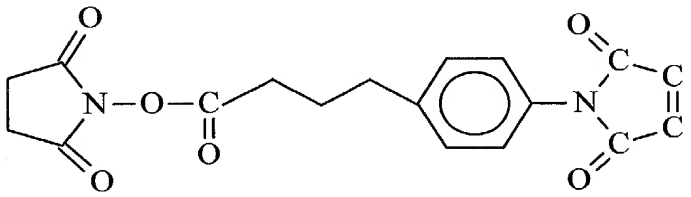


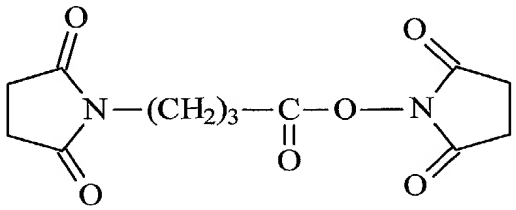


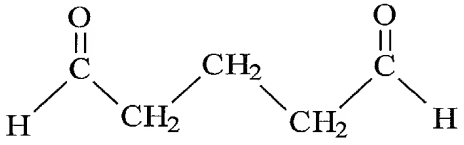


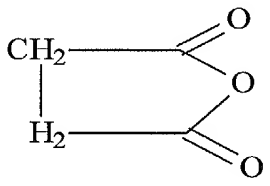


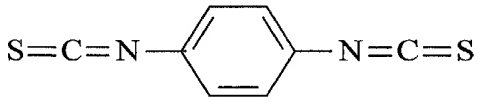
15. (Amended) Method according to claim 13, wherein the cross-linking agent is chosen from one of the following compounds:











19. (Amended) Blank biochip comprising in this order:

- a substrate,

- a layer of material capable of initiating and promoting on said layer the adhesion of a film of a pyrrole and functionalised pyrrole copolymer by electropolymerisation,

- a layer of resin coating said layer of material capable of initiating and promoting the adhesion on said layer of a film of a pyrrole and functionalised pyrrole copolymer, wherein microtroughs have been produced such that the base of said microtroughs is composed at least partly of the layer of said materials,

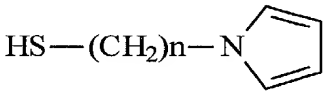
- a layer of a pyrrole and functionalised pyrrole copolymer, fixed on said material composing the base of said microtroughs.

Please add new Claims 21-26.

21. (New) Method according to claim 4, wherein step a) also comprises a chemical treatment step of the gold layer at the base of the microtroughs in the presence of a

functionalised pyrrole for example with a thiol group so as to form a monolayer of pyrrole onto said gold layer, at the base of said microtroughs.

22. (New) Method according to claim 21, wherein the functionalized pyrrole with a thiol group has the following chemical formula:



wherein n has a value ranging from 2 to 10.

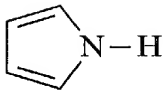
23. (New) Method according to claim 2, wherein the substrate is a silicon insert.

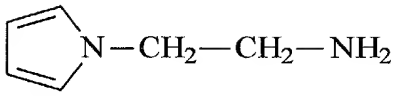
24. (New) Method according to claim 2, wherein the collective electropolymerisation is carried out by immersing the structured substrate obtained in step a) mentioned above in an electrolytic bath comprising a solution of pyrrole, functionalised pyrrole, and suitable chemical reagents for electropolymerisation, in the presence of a counterelectrode which is immersed in the electrolytic bath and is independent of the structured substrate, the layer of material capable of initiating and promoting the adhesion onto said layer of the pyrrole and functionalised pyrrole copolymer film forming a working electrode.

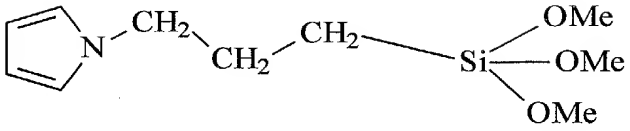
25. (New) Method according to claim 2, wherein the functionalised pyrrole is a pyrrole comprising a group chosen in a set comprising an $NH_2$ group, a thiol group, an N-hydroxysuccinimide ester group, a trimethoxy silyl group, a carboxyl, aldehyde and isothiocyanate group.

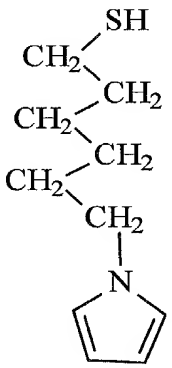
26. (New) Method according to claim 2, wherein the functionalised pyrrole is chosen from one of the following compounds:

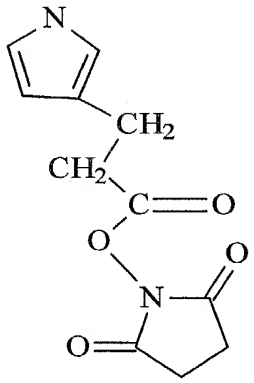
A3 cont'











## REMARKS

Claims 1-26 are active in the present application. Claims 5, 7, 10-12, 15 and 19 have been amended to remove multiple dependencies. Claims 21-26 are new claims. Support for the new claims is found in Claims 1-20. No new matter is added. An action on the merits and allowance of claims is solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Attorney of Record
Registration No. 24,618

Daniel J. Pereira, Ph.D.
Registration No. 45,518



(703) 413-3000
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